Automate your workflow with GitHub Actions- (GH-200T00)

Duration: 1 day
Audience: Professionnel TI

Who is this training for?

This course in intended for students who want to use GitHub to help developers and DevOps engineers build and deploy applications quickly. Additionally, students will discover which GitHub Actions features are available for their enterprise instance and learn how to use them.

Training objectives

By the end of this course, students will be able to:

- Enable and configure GitHub Actions in enterprise settings by applying repository and environment policies, branch protection rules, workflow permissions, and usage monitoring.
- Troubleshoot workflow failures and escalate issues appropriately by generating logs, support bundles, and leveraging GitHub Support resources.
- Design secure and scalable CI/CD workflows using best practices for YAML workflows that build, test, lint, and deploy applications.
- Integrate automated security checks and code scanning into pipelines to shift security left and enforce quality gates.
- Manage secrets and environment variables securely by scoping, rotating, auditing encrypted secrets, and integrating external vaults where needed.
- Configure, secure, scale, and monitor runners (GitHub-hosted and self-hosted) to support diverse workloads with high availability and compliance.
- Automate publishing of packages and container images via GitHub Packages and Container Registry, including versioning and release processes.
- Extend and optimize GitHub Actions through custom Actions development, GitHub Script and REST API scripting, matrix strategies, caching, and artifact management.

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- Orchestrate self-hosted runner fleets and enforce policy-controlled action usage while integrating external services via Marketplace Apps and webhooks.
- Monitor workflow performance, control costs, and maintain governance to ensure enterprise-grade reliability and efficiency.

Summary

Learn how GitHub Actions enables you to automate your software development cycle. You'll learn how to plan automation of your software development life cycle with GitHub Actions workflows, use GitHub Actions to automatically build an application, and use GitHub Script to interact with the GitHub API.

Course outline

Learning path: Automate you workflow with GithHub Actions

- Module 1 : Automate Development Tasks by Using GitHub Actions
- Module 2 : Build Continuous Integration (CI) Workflows by Using GitHub Actions
- Module 3 : Build and Deploy Applications to Azure by Using GitHub Actions
- Module 4 : Automate GitHub by Using GitHub Script
- Module 5 : Leverage GitHub Actions to Publish to GitHub Packages
- Module 6 : Create and Publish Custom GitHub Actions
- Module 7 : Manage GitHub Actions in the Enterprise

Approach and methodology

Practical and structured approach combining focused theory and guided workshops. Participants progressively discover how to automate software development workflows with GitHub Actions through hands-on exercises inspired by real-world DevOps and development scenarios.

They learn how to build and manage CI/CD workflows, automate deployments, integrate security controls, and extend automation using GitHub Actions, GitHub Script, and related tools.

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Led by a Microsoft Certified Trainer (MCT), the training emphasizes interactivity and the development of practical skills that can be immediately applied to modern software delivery and enterprise automation environments.

Prerequisites

Students should have the following knowledge and experience before attending this course:

- A basic understanding of software development concepts and experience using at least one programming or scripting language.
- Familiarity with GitHub, including version control workflows (e.g., branching, pull requests) and working within repositories.
- General knowledge of enterprise environments or development at scale, including CI/CD practices, access controls, and automation tools.
- Experience with integrated development environments (IDEs) and a working knowledge of collaborative development tools or platforms.

Recommendations

- Familiarity with GitHub Actions or automation concepts is helpful but not required.

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